

CURRICULUM VITAE – ANDREA PETRI

CONTACT INFORMATION

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EDUCATION

Doctor of Philosophy, Physics Expected June 2017
Columbia University
Research advisors: Prof. Zoltán Haiman, Prof. Morgan May

Master of Philosophy, Physics May 2014
Columbia University

Master of Arts, Physics May 2013
Columbia University

Laurea Specialistica, Theoretical Physics June 2011
Scuola Normale Superiore, Pisa, Italy
Thesis advisor: Prof. Andrea Ferrara

PUBLICATIONS

Do dark matter halos explain lensing peaks?
J.M. Zorrilla, Z. Haiman, D. Hsu, A. Gupta, A. Petri, Phys. Rev. D **94**, 083506 (2016)

CMB Lensing Beyond the Power Spectrum: Cosmological Constraints from the One-Point PDF and Peak Counts
J. Liu, J. Coin Hill, B. D. Sherwin, A. Petri, V. Bohm, Z. Haiman, Phys. Rev. D **94**, 103501 (2016)

Cosmology with photometric weak lensing surveys: constraints with redshift tomography of convergence peaks and moments
A. Petri, M. May, Z. Haiman, Phys. Rev. D **94**, 063534 (2016)

Mocking the Weak Lensing universe: the LensTools python computing package
A. Petri; Astronomy & Computing, Elsevier, **17**, 73-79 (2016)

Consequences of CCD imperfections for cosmology determined by weak lensing surveys: From laboratory measurements to cosmological parameter bias
Y.Okura, A. Petri, M.May, A.Plazas, T.Tamagawa; Astrophys. Journal, 825-1, **61** (2016)

Sample variance in weak lensing: how many simulations are required?
A. Petri, Z.Haiman, M.May; Phys. Rev. D **93**, 063524 (2016)

Emulating the CFHTLenS weak lensing data: Cosmological constraints from moments and Minkowski functionals
A. Petri, J. Liu, Z.Haiman, M.May, L.Hui, J.M.Kratochvil; Phys. Rev. D **91**, 103511 (2015)

Cosmology constraints from the weak lensing peak counts and the power spectrum in CFHTLenS data
J.Liu, A. Petri, Z.Haiman, L.Hui, J.M.Kratochvil, M.May; Phys. Rev. D. **91**, 063507 (2015)

	<p><i>Impact of spurious shear on cosmological parameter estimates from weak lensing observables</i> <u>A. Petri</u>, M.May, Z.Haiman, J.M.Kratochvil; Phys. Rev. D 90, 123015 (2014)</p> <p><i>Cosmology with Minkowski Functionals and moments of the weak lensing convergence field</i> <u>A. Petri</u>, Z.Haiman, L.Hui, M.May, J.M.Kratochvil; Phys. Rev. D 88, 123002 (2013)</p> <p><i>Supermassive black hole ancestors</i> <u>A. Petri</u>, A.Ferrara, R.Salvaterra; Mon. Not. R. Astron. Soc. 422, 1690-1699 (2012)</p>	
AWARDS	<p>Co-recipient of the Allan M. Sachs Teaching Award for contributions to the educational programs in the Columbia University Physics Department (May 2016)</p> <p>Bronze medalist, 37th International Physics Olympiad, Singapore (July 2006)</p>	
PEER REVIEW EXPERIENCE	<p>Served as peer reviewer for the American Astronomical Society (AAS) and for the MNRAS journal</p>	
TEACHING EXPERIENCE	<p>Co-Instructor, Science Honors Program 2012-present Columbia University Introduction to Modern Cosmology for high school students</p> <p>Graduate student instructor 2011-present Physics Department, Columbia University</p>	<p>Introductory Physics Lab (pre-medical) Fall 2011, Spring 2012</p> <p>Introductory Physics Lab (engineers) Fall 2012, Spring 2013</p> <p>Physical Cosmology (TA, grading) Fall 2012</p> <p>Particle Astrophysics and Cosmology (TA, recitations) Spring 2013</p> <p>EKA Advanced Physics Laboratory (TA) Fall 2013-</p> <p>Particle Astrophysics and Cosmology (TA, grading) Spring 2015</p> <p>Particle Astrophysics and Cosmology (TA, recitations, homework solutions writeup) Spring 2016</p>
TALKS	<p>Invited: Cosmology Lunch, Princeton University 9/26/2016</p> <p>Invited: Cosmology Seminar, LBNL 9/12/2016</p> <p>Contributed: LSST DESC collaboration meeting, SLAC 3/9/2016</p> <p>Contributed: LSST DESC collaboration meeting, Argonne National Laboratory 10/28/2015</p> <p>Contributed: AstroFest 2015, Columbia University 9/11/2015</p> <p>Contributed: Santa Fe Cosmology Workshop 7/17/2014</p> <p>Contributed: 27th Symposium on Relativistic Astrophysics 12/12/2013 Dallas, TX</p>	
POSTERS	<p>Columbia Data Science Institute Bi-Annual Symposium 4/1/2015</p>	

POSITIONS	Graduate Research Assistant , Columbia University	2011-present
	Summer Associate , Morgan Stanley, New York	Summer 2015, Summer 2016
REFERENCES	Zoltán Haiman, Professor, Columbia University	zoltan@astro.columbia.edu
	Morgan May, Professor, Brookhaven National Laboratory	may@bnl.gov
	Columbia University	
	Lam Hui, Professor, Columbia University	lh399@columbia.edu
	Andrea Ferrara, Professor, Scuola Normale Superiore	andrea.ferrara@sns.it
	Pisa, Italy	